



Business Justification

Facilities Management Exploration

State of Tennessee, Office of Customer Focused Government, February 2016

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Executive Summary

In support of the State of Tennessee's efforts to improve services and lower taxpayer costs in its real estate operations, a comprehensive business justification cost savings analysis was performed. This analysis explores whether acquiring services through a professional facilities management provider offers improved care and maintenance at state facilities at a lower cost to taxpayers. The potential savings analysis includes higher education and those state government properties not already maintained by a professional facilities management service provider. This report provides a compilation of the exploration governance, methodology and findings of the business justification analysis.

To guide the efforts of all involved, the state's governance team adopted the following guiding principles which are stated in order of priority:

- Demonstrate regard for the welfare of current facilities services employees;
- Seek expertise, efficiency, innovation, and quality in the services to be provided; and
- Be a good steward of taxpayer resources and their buildings.

The results presented in this business justification are comprised of four key focus areas:

1. **Tennessee General Government Experience:** Results from the state's award-winning experience with a professional facility management service provider.
2. **Market Strength Assessment:** Expected market strength to determine if there is enough interest from potential service providers for the state.
3. **Texas A&M University Experience:** Results achieved by Texas A&M University System through professional service provider.
4. **Potential Savings Analysis:** Benchmarking cost savings using the Whitestone Facility Operations Cost Reference.

In summary, the analysis presented in this report projects an overall total estimated first-year savings of approximately \$29.7 million through a service provider approach. In the following years, the annual savings is projected to increase to approximately \$35.8 million. Based on all information gathered through this process, the findings indicate a probability for increased service at a lower cost to Tennesseans. Due to the significance of the potential cost savings estimates, state and higher education officials involved in this effort support continuing the exploration process.

All parties also agree it is in the best interest of all stakeholders to engage an independent third party to objectively verify/validate the cost analysis performed as part of this report. The state will be seeking to procure these services through an open solicitation to determine if the conclusions drawn in this report are valid. The various

higher education and state agencies will continue to be included in the ongoing exploration process to make sure any potential service provider has the qualifications and experience to deliver quality facilities management services.

The final decision on whether to proceed with using the services of a professional facility management contract service provider belongs to individual state agencies and campuses. State agencies and higher education campuses will still have the option to choose whether or not to utilize a service provider even after all activities outlined in this document to continue gathering information are conducted. This information is needed to help state agencies and campuses make an informed decision including: results from validation of state costs; receipt of vendor proposals; and a final comparison of validated state costs compared to service provider costs.

Business Justification

Facilities Management Exploration

Overview

Real estate is one of the state's largest expenditures, representing approximately \$550 million in annual costs, including utilities. The state's extensive and diverse real estate portfolio consists of more than 7,500 different aged structures, totaling approximately 94 million square feet (including leased facilities) in every county.

These buildings have diverse uses, including, but not limited to:

- Office buildings;
- Classrooms and educational facilities;
- Residence halls and hospitality facilities;
- Hospitals and laboratories;
- Libraries;
- Day care centers;
- Prisons; and
- Armories, etc.

Today, the management of these facilities varies. In some cases facilities are state managed with employees performing the work. In other cases, state organizations have chosen to work with contract managed service providers to perform the work.

Research and experience show that professional facilities management service providers have been able to effectively drive best practices that can reduce costs and improve service quality.

State of Tennessee Real Estate Portfolio

The state's real estate portfolio includes over 7,500 different structures totaling approximately 94 million square feet.

In order to explore these opportunities further, the Strategies for Efficiency in Real Estate Management (SEREM) project was established. The SEREM project consists of four key initiatives:

- **Alternative Workplace Solutions (AWS)** is exploring ways to increase workforce productivity and reduce real estate needs and costs through flexible schedule and workspace options.
- **EmPowerTN (Energy Management)** is tasked with lowering utility costs through energy efficiency improvements in state facilities, and developing an enterprise utility data management system.
- **Facilities Management (FM)** is exploring ways to improve services at a lower cost at state facilities through professional facilities management service provider(s).
- **Real Estate Process Improvement (REPI)** is exploring ways to lower contracting costs by streamlining real estate processes related to construction, leasing, acquisition and other property management activities.

This report is focused on the exploration, approach and findings from the Facilities Management initiative.

Figure 1
SEREM Value for Tennessee

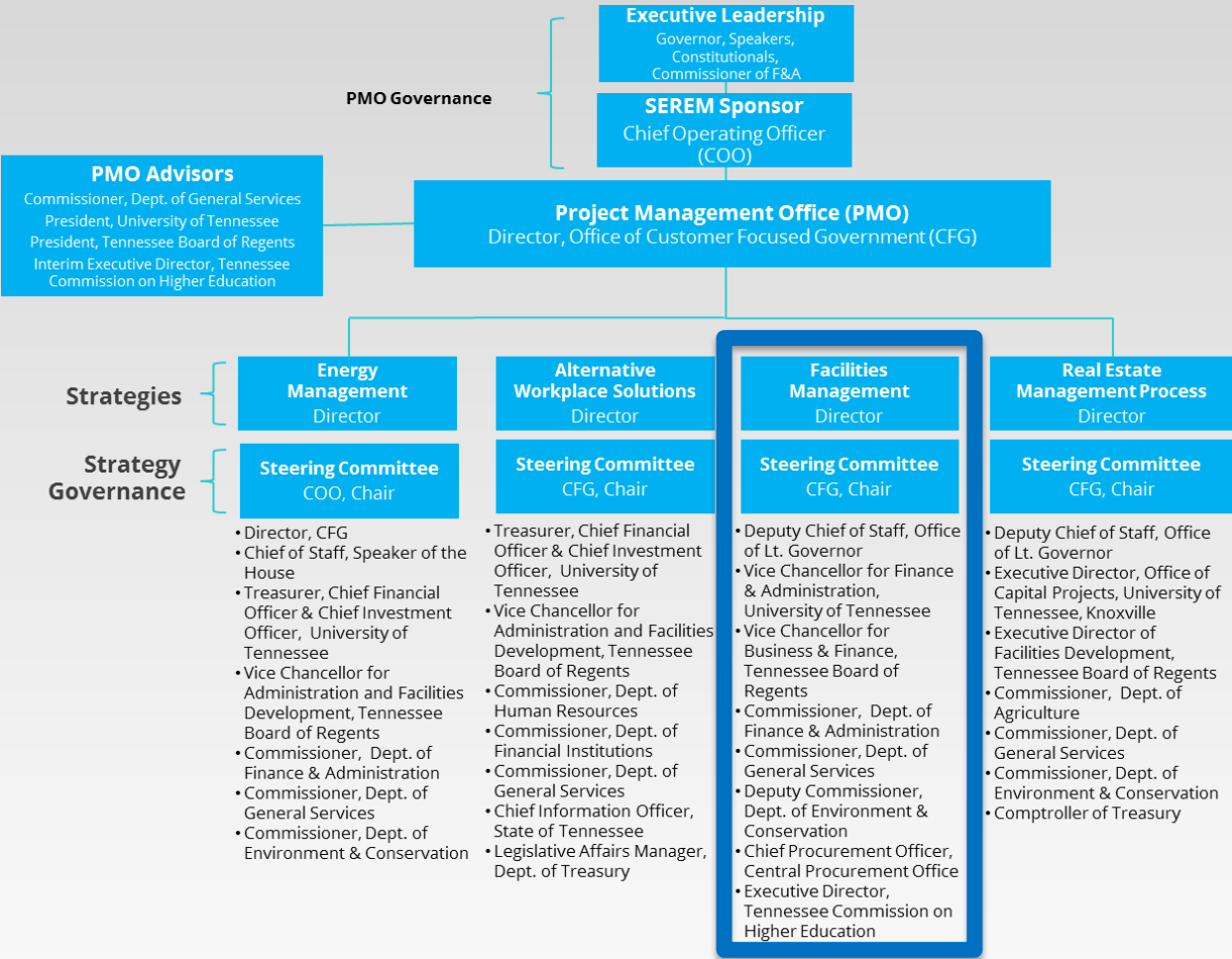


Project Governance

Project Governance

The SEREM project has a governance structure that consists of a Project Management Office (PMO) to oversee all four of the SEREM initiatives, with each initiative having a project director and Steering Committee. The day-to-day management of the PMO is housed in the Department of Finance and Administration's Office of Customer Focused Government, which is focused on helping state agencies provide the best service at the lowest possible cost. Responsibilities for this office include: operation performance management; Transparent Tennessee; and adoption of operational best practices. The FM Steering Committee is comprised of a cross section of stakeholders with representation from the legislative branch, executive branch, the Tennessee Board of Regents (TBR) System, and the University of Tennessee (UT) System (See Figure 2).

Figure 2
SEREM Governance Structure



The FM initiative also has a core team that meets more frequently and performed the exploratory work. The core team is chartered to make recommendations to the FM Steering Committee. The core team – similar to the steering committee – is made up of stakeholders from higher education and general government. The diversity of the team is designed to help identify and balance the needs of the various stakeholders that would be affected by the result. Project members have met regularly since the inception of the FM initiative, with key responsibilities as follows:

- *FM Core Team*: Key responsibilities include conducting research into best practices and potential opportunities for improvement, creating reports needed to document the findings, and making recommendations to the Steering Committee.
- *FM Steering Committee*: Key responsibilities include reviewing the work performed by the Core Team, directing the Core Teams efforts, and making recommendations to the SEREM Executive Leadership.
- *SEREM Executive Leadership*: Key responsibilities include reviewing the recommendations of the Steering Committee and deliberating recommendations.

To guide the efforts of all involved, the state's FM governance teams have adopted guiding principles for the initiative:

- Demonstrate regard for the welfare of current facilities services employees;
- Seek expertise, efficiency, innovation, and quality in the services to be provided; and
- Be a good steward of taxpayer resources and their buildings.

The guiding principles are in order of priority, with the welfare of current facilities management employees being the state's top priority. All work and decisions are made with these guiding principles in mind.

Intent of Facilities Management Initiative

Intent of Facilities Management Initiative

The intent of the FM Initiative is to explore ways to improve services of facilities management within the state's real estate portfolio at a lower cost. The scope includes exploring whether there is potential for savings through contract managed professional facilities management service providers to acquire increased services at a lower cost than state managed.

If it is determined a professional facilities management service provider may achieve the state's goal of increasing service at lower costs, the FM Initiative could result in the creation of a statewide contract with one or more professional facilities management service providers. The contract could be used by the various state agencies and institutions if they so choose. For clarity, facilities management services that are being considered as part of the FM initiative include:

- Custodial;
- Grounds;
- Maintenance and repair;
- Management services;
- Pest control;
- Refuse;
- Road clearance; and
- Security (access control).

Any Tennessee state agency, institution or other governmental body would be able to utilize the overarching facilities management contract. Also, an independent college or even a local municipal school district could also benefit from the contract if they deemed the contract helped them achieve higher services at lower costs.

State agencies and institutions will **not be required** to use the contracting vehicle. It is likely that the contract(s) could be utilized for services differently by different state agencies and institutions. The final decision to proceed with using the services of a professional contract service provider for facilities management belongs to the state agencies/campuses, which will be responsible for justifying their decisions to their local leadership and various boards.

For higher education, there is potential flexibility for each institution, and perhaps each individual campus, to sign their own document of intention to utilize the contract. Governance for higher education would either be at the campus or system level, with that decision to be made by the higher education systems. Each institution would have authority to set desired key performance indicators which establish the measures for rating performance for the facilities within their real estate portfolio within the parameters established by the contract. For example, the UT Medical Center would be able to establish desired service levels for cleaning that could be higher than what another campus might establish for cleaning classrooms.

Also, institutions will be able to further customize the contracting tool by selecting those portions of services which meet their needs. For example, a campus could select

custodial services, maintenance and repair services, but not grounds maintenance. It is the intention to create a flexible framework which can be utilized to serve the diverse requirements of the state's facilities and institutions in the best way possible.

In addition, the state would not be involved in the business transactions between the institution and the service provider. Any savings would come directly back to the institution. For example, if a campus or higher education system saved 20 percent on the cost of facilities management services, they would be able to redirect these savings to higher priority items such as lower tuition, scholarships, hiring additional faculty, or research.

For general government facilities, it is anticipated that there would be a single contract attachment covering all agencies (not part of the existing Department of General Services (DGS) portfolio covered under the existing contract) that would utilize the contract. Governance for this would be managed through the State of Tennessee Real Estate Asset Management (STREAM) group in DGS, and coordinated by them with the various agencies.

For clarity, the following key points summarize provisions under this initiative that have been agreed to by executive leadership:

- Any contract that would be signed by a contract service provider will include strict language prohibiting them from initiating any reduction in force at any time during the duration of the contract period. Thus no current qualified and productive facilities management employee will lose their job as a result of a contract.
- The various agencies and higher education campuses will continue to be included in the entire process to make sure that the ultimate service provider respondents have the qualifications and the experience to deliver quality facilities maintenance services.
- The various agencies and higher education campuses will still have the option to opt-out even after all state costs are validated, all proposals are received and the final comparison of validated state costs compared to proposed service provider costs is complete.
- The final decision to proceed with using the services of a professional contract service provider for facilities management belongs to the agencies and the campuses, which will be responsible for justifying their decisions to their own local leadership and various boards.

In terms of employment, it's also important to keep in mind that if the state should choose to use a professional facilities management service provider in some areas, the vast majority (most likely all) of the positions would be filled by people who will live in the state of Tennessee. Also, the institutions will continue to have governance control over facility management. A private company will not be "operating" state agency and institutional buildings.

Exploration Project Phases

Exploration Project Phases

The FM project approach involves three phases beginning with the Business Justification Phase (see Figures 3 and 4 below). All three phases are considered exploratory in nature, with the ultimate goal to determine if and how professional facilities management service providers could improve service while reducing costs – ultimately freeing up much needed funds that can be redirected by implementing state agencies and campuses to high priority needs.

Figure 3
Exploration Project Phases

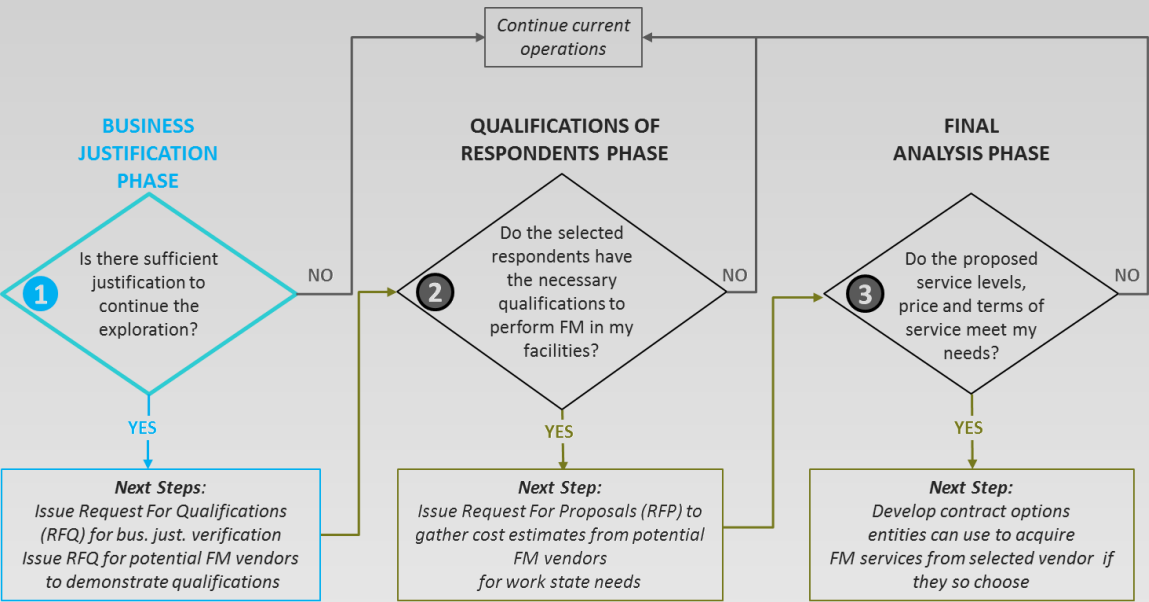


Figure 4
Actions to Date



Business Justification: Phase I

The Business Justification Phase consists of a comprehensive business justification with the purpose to explore whether there is enough evidence to support the state's continuation to gather information to better understand current state costs compared to a potential contract service provider's costs. Contracts could be awarded to one or more service providers that provide expertise in facility management.

After significant research and discussion among the different agency and institutions involved, this business justification phase focused on the following four areas:

1. **Tennessee General Government Experience:** Results from the state's current experience with a professional facility management service provider resulting in a nationally recognized program at over 10 percent of its portfolio (10 million square feet) with \$13 million in savings in the first two years (including energy).
2. **Market Strength Assessment:** Expected market strength to determine if there is enough interest from potential service providers for the state.
3. **Texas A&M University Experience:** Results achieved by Texas A&M University System through professional service provider across enterprise.
4. **Potential Savings Analysis:** Benchmarking cost savings using the Whitestone Facility Operations Cost Reference - an industry recognized tool for benchmarking the cost of facility management and maintenance; assumes all needed maintenance is performed at the appropriate time.

Each of these four areas is discussed in more detail in the Business Justification Results section.

As part of the state's project approach, the FM leadership has agreed it is in the best interest of all stakeholders to engage an independent third party to objectively verify/validate the benchmarking cost analysis performed as part of the business justification. In order to accomplish this, the state will issue a Request for Qualifications to procure these services (referred to as RFQ.1) following the release of this business justification report. The final results of the validation process will be reviewed by FM governance (see Figure 2) as part of the exploration process.

Concurrently, the state will proceed with gathering the necessary data to make an informed decision by issuing a Request for Qualification to evaluate and select qualified respondents to potentially provide contract facility management services (referred to as RFQ.2) for entities that so choose. Based on the findings contained in this report, the FM governance teams have agreed to continue exploring potential further, by gathering additional information. This places the project in the Qualification of Respondents Phase as shown in Figure 3.

Qualification of Respondents: Phase II

The Qualification of Respondents Phase is primarily focused on gathering qualifications of potential respondents to perform work the state may need. This part of the process also involves collaborating with potential suppliers who are industry experts to understand options and best practices for working with professional facilities management service providers. This begins with issuing a solicitation (referred to as RFQ.2) and receiving responses for qualified suppliers. An independent team of evaluators will select the qualified respondents to participate in a process called Collaborative Value Development (CVD) – a comprehensive evaluation process to utilize the expertise and knowledge of the qualified respondents, while strictly adhering to the state's procurement policies.

The CVD process is an opportunity for qualified respondents and the state to hold one or more collaborative events to engage in an in-depth discussion concerning the needs of the state with regard to the scope or specifications of a potential contract that could be awarded by the state through a subsequent solicitation. The goal of the CVD is to develop innovative solutions that will ultimately reduce costs and improve service provider performance, with a focus on the outcomes needed by the state.

Final Analysis: Phase III

As proposed in the overall project approach, at the conclusion of the CVD process, the state's Central Procurement Office would independently draft a Request for Proposal (RFP) to issue to qualified respondents selected pursuant to RFQ.2.

The RFP process allows the state to gather proposals from potential service providers that include cost estimates. The state could select one or more service providers to move to the Final Analysis Phase, which includes a final analysis to determine if the service levels, price, and terms of service meet the various needs of state agencies and institutions. Pending approval by FM governance, the state could then enter into final negotiations and execute a contract with one or more service providers that could be utilized by other agencies and institutions if they so choose.

It is important to note once again that even if a contract is executed with a professional facilities management service provider(s), agencies and institutions are not required to use the contract. Rather, agencies and institutions will have the ability to review the contract and determine if they want to use the service provider.

It is also important to note that no contract will be signed with any professional facilities management service provider(s) unless all three phases of the FM initiative are approved by the state's FM governance.

Business Justification Results

Business Justification Results

The FM initiative has concluded Phase 1 – the Business Justification. The following results have been reviewed by the project's governance as outlined in Figure 2. This section of the report provides an overview of the business justification findings. As mentioned previously, the business justification includes a comprehensive study across four areas that are discussed in more detail in the following sections.

1. Tennessee General Government Experience

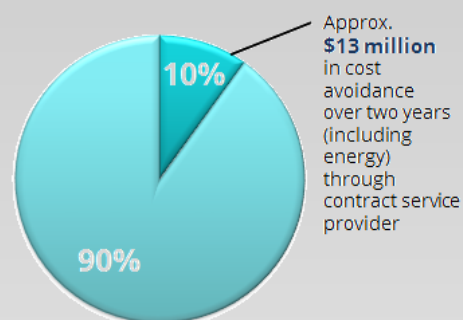
In 2013 the State of Tennessee entered into a performance-based contract for a professional facilities management services provider to manage over 10 million square feet of the state's "General Government" real estate portfolio. The "General Government" portfolio of properties primarily represents office and professional services buildings, such as the State Capitol, Legislative Plaza and the Tennessee Tower in Nashville. The scope represented approximately 10 percent of the state's real estate and facilities management portfolio.

The state has experienced overall success with both improved service and reduced costs since utilizing a professional facilities management service provider.

The state has saved \$13 million in the first two years of the contract (including \$2.14 million in energy savings). This is an average savings of over \$5 million annually. The state has also seen a steady rise in customer satisfaction since shifting to a professional service provider taking over the maintenance and care of the buildings under scope.

Prior to the provider coming on board, the state did not measure customer satisfaction. As part of the project, the state began formally measuring customer satisfaction as a key performance indicator under the contract which is benchmarked against an industry standard metric. Today, the state is achieving 96 percent customer satisfaction ratings, far exceeding the industry standard average of 85 percent. This increase has a direct correlation to increased responsiveness and preventive measures put in place by the provider.

TN Real Estate Portfolio



General government properties represent ~10% of state's total real estate portfolio.

Annual Cost Savings vs. Original \$36.9M Baseline

	FY 2014		FY 2015	
Labor	\$ 1.93	39%	\$ 1.56	27%
Lower Sub-Contracting	2.08	42%	2.22	38%
Procurement Efficiencies	0.96	19%	2.05	35%
	\$ 4.97*		\$ 5.82*	

** Does not include \$2.13 million in energy savings, or an additional \$6.5 million investment over two years for work that would otherwise have become additional deferred maintenance.*

Where do the savings come from?

More than half of savings is from increased employee training which lowers sub-contracting costs, and from reduced acquisition costs due to scale FM vendor provides.

In addition, the state measures several other key performance indicators. Analysis has shown significant positive benefits across the other key indicators as well. The state has received recognition for their efforts, winning the National Association of State Procurement Officials (NASPO) *Cronin Award for Procurement Excellence* in 2014 and the National Association of State Chief Administrators (NASCA) *Innovations in Government Award* in the infrastructure category in 2015. The results achieved were enabled by changes in four specific areas:

1. **Procurement Leverage.** Many professional facilities management service providers procure goods and services (e.g. cleaning supplies, paint, etc.) under their scope of work. For example, the state consumes large amounts of cleaning supplies every year. While it is natural to assume the state can get a better “deal” because of its increased buying power and volume discounts, the state’s purchasing power does not approach the economies of scale offered by a professional facilities management service provider. This makes sense when you think about it as providers consolidate their purchasing power as they buy cleaning supplies for hundreds of companies – not just for the state. Under the state’s contract, the service provider has implemented multi-year contracts with standardized terms and conditions which have brought significant savings to the state.
2. **Improved Training/Skills.** A key benefit the service provider has brought to the state is training programs. Prior to engaging with a professional facilities management service provider, the state had to subcontract many tasks that required skilled resources, as state employees did not have the skills and certifications needed to perform the work. Because the service provider has thousands of such employees, they have invested in formal training programs that the state does not have to pay for or manage. Since managing a portion of the state’s buildings under the scope of the contract, former state employees have gone through hours of trainings, resulting in certifications that these individuals did not have access to as state employees. The result is highly specialized training, resulting in a broader skilled facilities management workforce than previously.
3. **Optimized Staffing.** Prior to engaging a professional services provider to manage the state’s real estate portfolio for general government, the state used a large number of sub-contractors to perform work (e.g. painters, plumbers, roofers, electricians). The professional facilities management services provider has trained employees to perform these services through their own workforce resulting in the ability to allocate these resources across the various buildings as needed. In addition, the professional service provider has robust staffing and work order management systems that further drive staffing efficiencies. Optimized staffing has enabled the service provider to drive efficiencies in how the work gets done, resulting in lower costs to the state and Tennessee taxpayers.

4. **Labor Savings.** Prior to working with a professional facilities management service provider the state had 129 employees performing facilities management tasks across its buildings. In many cases, each building had dedicated resources. The professional facilities management service provider aggregated the management of multiple facilities under fewer managers while still improving service levels. The service provider was able to provide tools, technology, and reporting capabilities that enabled the employees to be far more efficient.

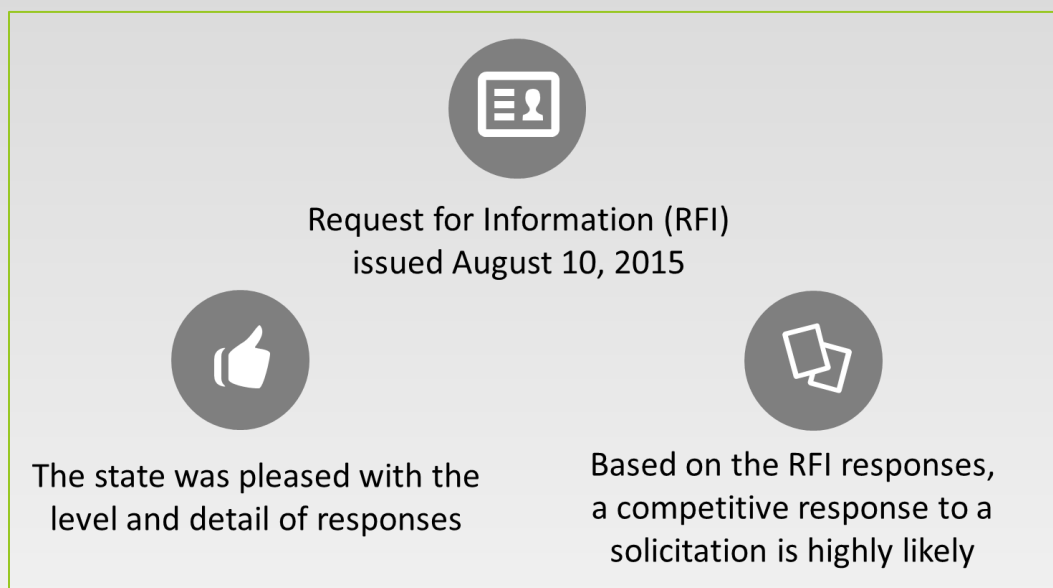
The state's initial success from this experience was one of the key drivers in launching the FM initiative.

2. Market Strength Assessment

The state issued a Request for Information (RFI) on August 10, 2015 as an initial step with two primary purposes. First, the goal was to determine if there were professional facilities management service providers that were interested in managing the state's facilities. Second, to learn what information service providers would need from the state in order to properly respond to additional procurement requests if the state continued the exploration.

The result of the Request for Information showed there was significant interest from service providers, especially given the potential scale and scope of the opportunity. The breadth and depth of the response base indicated that the state would have enough qualified service providers to compete in a Request for Proposal if the FM Initiative passed the business justification phase. Due to state statute and procurement policies and procedures, details of the response are prohibited from further disclosure.

Figure 5
Market Strength Assessment



3. Texas A&M University System Experience

As the FM Core Team was conducting research, one of the basic questions that was asked was “Who else has done this?” On the general government side with office buildings, the State of Tennessee is actually a leader, receiving two of the aforementioned awards for the work referenced in the General Government section. In higher education, it is a different story. Some activities have been outsourced in state higher education institutions – dining services nearly everywhere, custodial services in some places, etc. However, the state has limited experience with using a professional facilities management service provider to provide services in higher education.

Recognizing higher education has different types of facilities and customers, the FM Core Team set out to benchmark with other states that did have experience in using a professional facilities management service provider for higher education. Many higher education systems were considering shifting to professional facilities management service providers. However, one system that is pioneering the use of a professional facilities management service provider in higher education is the Texas A&M system, with the flagship campus located in College Station, Texas. The benchmarking effort included several phone interviews and a delegation visit to the university on October 27, 2015 consisting of stakeholders involved in the FM process and the Vice Chancellor for Business Affairs of Texas A&M.

During this research, the state learned Texas A&M was under contract with its professional facilities management service provider starting in August 2012. The scale of their effort is similar to that of Tennessee’s needs, spanning 11 campus locations. In total, Texas A&M has some presence in 250 of the 254 counties in Texas. The benchmarking effort revealed the Texas A&M system has already had significant benefits from the initiative. It also highlighted several insights that are worthy to note. The key findings are summarized below.

Key Drivers for Change

Texas A&M cited the primary reasons for shifting to a professional facilities management service provider were:

- Significant state budget cuts;
- Focus on core mission;
- Improved quality;
- Reinvest savings into key areas of academic mission;
- Deferred maintenance (discussed in more detail in the next section); and
- A desire to establish a sustainable business model for decades to come.

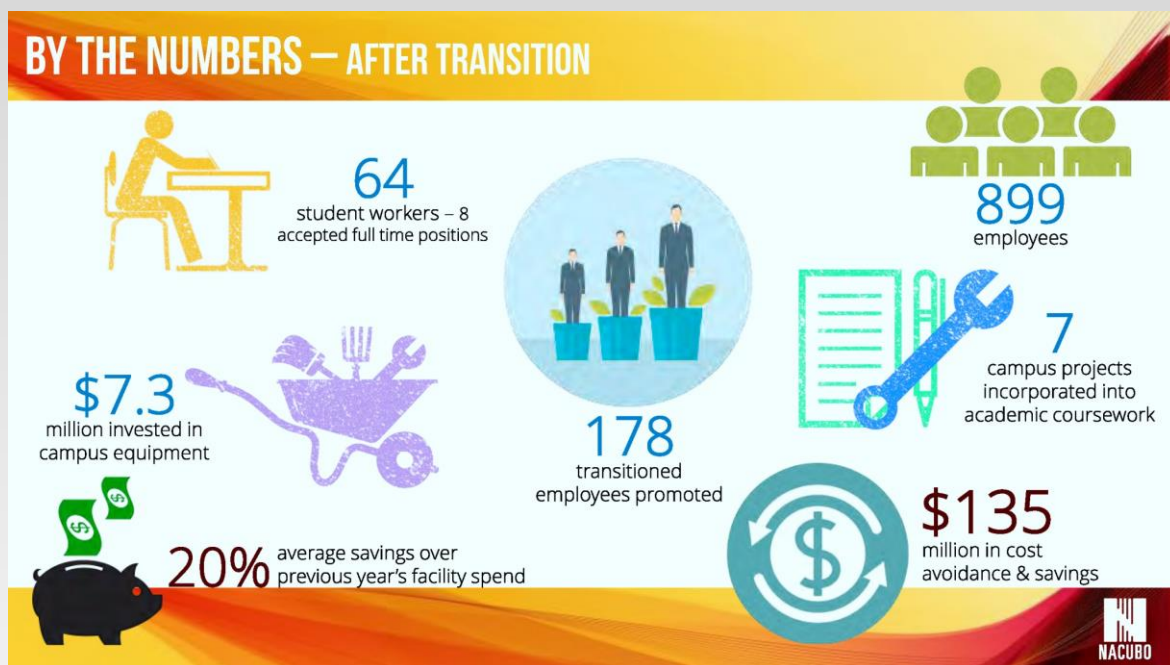
These reasons have been publicly documented in a presentation to the National Association of College and University Business Officers (NACUBO). The reasons for change at Texas A&M are very closely aligned with the key issues facing Tennessee.

Texas A&M University Results

The results attained by Texas A&M have been significant, and have included improvements in both service levels and cost savings. In the area of cost savings and cost avoidance, the Texas A&M system is projecting the following:

- In Brazos County (Texas A&M and agencies), ~\$135,166,489 over a 10-year period for facilities support services (landscape, custodial and building maintenance);¹
- For the regional campuses, ~\$92,237,665 over a 12-year period for facilities support services (landscape, custodial and building maintenance); and
- Total potential annual savings/cost avoidance is approximately \$21 million (not including dining services) for a scope similar to the one being considered by the State of Tennessee.

Figure 6
Highlights of Texas A&M Facilities Management Results



Source: Texas A&M Presentation, NACUBO Conference, July 2015.

². Texas A&M is expecting to also save an additional ~\$135,347,371 over a 10-year period for dining services. However, dining services is not in the scope of the state's FM initiative, as those services are already outsourced in nearly all agencies/institutions.

Focus on People

Another key finding from the Texas A&M benchmarking focused on people. Managing current facilities management employees was the top criteria for the chancellor when they began to evaluate responses from service providers and remained the top priority throughout their entire process. During the visit, the vice chancellor emphasized people were their most important consideration in the entire effort and shared the following critical success factors:

- If your strategy involves transitioning people from the state to the service provider, it is important to not take a “gradual approach” to avoid uncertainty in the employee base.
- It is important to inform employees about the process - what work is under scope to transition, and the plan and timeline for the transition. It is essential to keep all informed along the way to ease employee concerns.
- It is important to be transparent. Texas A&M held public forums during the final evaluation of proposals where they gave updates and answered questions. The level of transparency eased concerns.

The vice chancellor expressed concern with the way that some higher education institutions are approaching the FM initiatives sharing that there was communication with several higher education institutions before the Texas A&M project kicked off, and that most are still talking about it three-plus years later. Specifically, he felt this lacked compassion for their people who were kept in a continual state of the unknown. This insight was a key driver in the State of Tennessee’s adoption of the top priority guiding principle for the state’s FM initiative: to demonstrate regard for the welfare of current facilities services employees by communicating continuing employment opportunities with comparable compensation and benefits will be included in any contracting agreement.

Additional Benefits

Texas A&M also is experiencing other non-monetary benefits as a result of their initiative including:

- *Improved control of facilities.* The governance structure put into place results in a single point of focus for the campus, rather than being spread across multiple authorities as it was before;
- *Greater accountability and performance.* User satisfaction has increased across all campuses, and continues to do so;
- *Customized award winning programs to enhance the Texas A&M brand* including the James S. Cogswell Award for Outstanding Industrial Security; and
- *Improved services.* Service levels have remained the same and in some cases, increased.²

² Benefits were expressed during the benchmarking visit as well as shared publicly by Texas A&M in a National Association of College and University Business Officers (NACUBO) presentation to their annual conference in July 2015.

4. Potential Savings Analysis

A key part of the business justification is to quantify potential cost savings. The initial approach used the cost savings attained in state's General Government experience to forecast the potential savings that could be expected from the state's other facilities.

Some higher education stakeholders expressed concern that the initial cost benchmarking was not an "apples to apples" comparison because the approach did not factor in the differences between the facility types and potential efficiencies that may already have been attained by various institutions. The team agreed to benchmark the current campus costs against an industry standard. After evaluating several industry benchmark resources, and based on the recommendation of both higher education representatives, the FM Core Team chose the *Whitestone Facility Operations Cost Reference 2014-2015*, which is a widely recognized industry reference guide for benchmarking facility management and maintenance.

Data Sources

Each agency/institution supplied actual expenditures for July 2013 through June 2014 at the lowest level of detail available. It was important that key stakeholders from the agencies/institutions felt the data for their facilities was accurate. Figure 7 summarizes how data was collected.

Figure 7
Data Collection Process

	Data	Service Levels
Higher Education	<ul style="list-style-type: none"> Actual cost data was provided by higher education systems Space usage acquisition and analysis was provided by the campuses 	<ul style="list-style-type: none"> TBR service levels were agreed by the campuses UT service levels were chosen by the campuses
General Government (DGS Portfolio)	<ul style="list-style-type: none"> Actual cost data came from detailed FM spreadsheet, with total matched to government audited annual total Space usage acquisition and analysis was provided by the STREAM group 	<ul style="list-style-type: none"> Service levels were estimated by FM Core Team

Service levels represent what work is performed at what frequency.

Cost data was provided by the UT System and the TBR System, and then verified by the individual campuses as applicable to the space and functions being benchmarked.

The individual campuses did the analysis of the space usage to select the proper comparisons to the Whitestone categories. The individual campuses in the UT System also performed the selection of the service levels for each facility type. In the TBR system, a consensus was reached on the service levels by facility type for the system as a whole.

It was also important to benchmark the costs of the existing facilities management service provider. For the facilities already in scope in General Government, the cost data was taken from a detailed spreadsheet that was supplied to the state by the current service provider as part of the state's standard accounting process. The state used the service provider's data because they were able to provide a greater level of detail than contained in the state's accounting systems. As a quality check, the total of all costs provided by the service provider was compared to the total billed to the state and paid to the service provider as audited by the state comptroller. The space usage analysis was performed by the STREAM group in the Department of General Services. The service levels were defined by the FM Core Team in a joint working session. No modifications were made to the data or to the service levels once submitted by agencies/institutions.

As mentioned, a third party will perform an independent and objective validation of the cost analysis. The final results of the validation process will be reviewed by the FM leadership as part of the review process for continuing the initiative.

Methodology

As mentioned earlier, the Whitestone Cost Reference is an industry recognized tool for benchmarking the cost of facility management and maintenance. There are several variables that must be specified in order to determine the benchmark cost per square foot. These variables include:

- The type of space, and the gross square feet of that space. This is referred to as *Facility Type*. For higher education, this was done by comparing the Higher Education General Information Survey (HEGIS) codes to the Whitestone descriptions for Facility Type.
- The service being performed in that space, referred to as the *Service Category*. There are 11 different Service Categories in the Whitestone Cost Reference. The benchmarking exercise used eight of the 11, including Custodial, Grounds, Maintenance and Repair, Management, Pest Control, Refuse, Road Clearance and Security. The ones not used related to the cost of utilities, which was separated for the purposes of this study. This was done because billing for utilities is usually not performed through a professional facility management service provider.
- For each Facility Type, and each Service Category, a *Service Level* (High, Medium or Low) was selected based on the description in the Whitestone Cost Reference. The Service Level is determined by the individual tasks performed and the frequency with which they are performed.
- Based on the Facility Type, the Service Category, and the Service Level, the cost (*expressed as \$/Gross Square Foot*) is displayed in the Whitestone Cost Reference.

Approach to Actual Cost and Whitestone Benchmark Comparability

Using the above variables, the team set out to “normalize” the state’s actual costs against the Whitestone benchmarks using the methodology described in the Whitestone Cost Reference. This was done by adding or subtracting from the agency/institutions’ costs to align with the parameters in Whitestone. For example, utility infrastructure costs to bring power to the meter (usually located on the exterior of a building) were included in the “Energy” section of the Whitestone report and infrastructure costs within the building were included in their “Maintenance and Repair” section. However, on campuses like the University of Tennessee, Knoxville there is significant infrastructure between the meter (often located at a substation) and the building. As such, the cost data had to be added to the Whitestone benchmark to cover that cost.

In addition, the benchmark data had to be normalized for service types. The Whitestone report carefully outlines detailed descriptions for three different levels of services for what is covered in each level. A closer look at the “Security Services” areas will show how this was done. The Whitestone Cost Reference defines a “Low Level” of security as “Access Control.” In General Government buildings, the Security Services are paid through the professional facilities management service provider. But at the University of Tennessee, Knoxville, University Police provide security, funded through a completely separate budget. The FM Core Team determined that the best way to create a fair comparison was to use Low Level, and deduct from the individual facility costs anything spent above that. All of these adjustments and service level call-outs were documented, and reviewed by the FM Core Team for accuracy. For more information about how the state approached normalizing the Whitestone benchmarking analysis, please see Appendix 1.

Approach to Development of Cost Analysis Data Sheets

A key part of the analysis was creating the actual benchmark spreadsheets which would provide the cost savings estimates. Creating a spreadsheet allowed each agency/institution to multiply the Whitestone Benchmark Cost value times the appropriate *Gross Square Feet (GSF)* times the appropriate Local Operations Cost Index to determine the benchmark cost value for that facility type and that service category. The *Local Operations Cost Index* is the percentage of the cost for that geographic location as compared to Washington DC, which is the basis for all Whitestone benchmark values. In Tennessee, there are Local Indexes for Chattanooga, Knoxville, Memphis and Nashville. The final step was to sum all of the benchmark costs for an agency/institution, and divide them by the total GSF for that agency/institution to determine the cost per gross square feet (\$/GSF) for that agency/institution.

Figure 8 provides a graphical snapshot of how the benchmark analysis was performed using the Whitestone Cost Reference.

Figure 8
Example of Benchmark Calculation Factors

Facility Type	Whitestone Category	Benchmark Cost/GSF	GSF X Rate X Index = Cost							
Area Type	GSF by Space	Whitestone Space Type	Custodial				Grounds			
		1=High / 2=Med/High / 3=Med / 4=Low	SL	Rate	Index	Cost	SL	Rate	Index	Cost
Unclassified Areas										
Steam Plant Mechanical Spaces	0 Central Plant, Boiler		5	NA	0.636	\$0	3	\$0.26	0.965	\$0
Chilled Water Plants	12,096 Central Plant, Chilled Water		31	3	\$0.21	\$1,615	3	\$0.26	0.965	\$3,035
Computer Rooms	8,393 Data Center, Tier III		11	3	\$1.21	\$6,458	3	\$0.26	0.965	\$2,106
	20,489					\$8,075				\$5,141
Classroom Areas										
1100 - Classroom, General	101,605 College Lecture Classroom		8	3	\$1.91	\$123,426	3	\$0.26	0.965	\$25,493
1102 - Classroom, Special Purpose	40,481 College Lecture Classroom		8	3	\$1.91	\$49,174	3	\$0.26	0.965	\$10,157
1103 - Class Auditorium, General	19,884 College Auditorium		6	3	\$4.49	\$56,782	3	\$0.26	0.965	\$4,989
1104 - Class Auditorium, Special	9,691 College Auditorium		6	3	\$4.49	\$27,675	3	\$0.26	0.965	\$2,432
1106 - Classroom, Seminar	5,452 College Lecture Classroom		8	3	\$1.91	\$6,623	3	\$0.26	0.965	\$1,368
1107 - Classroom, Staff Training	3,331 College Lecture Classroom		8	3	\$1.91	\$4,046	3	\$0.26	0.965	\$836
1150 - Classroom Service	5,819 College Lecture Classroom		8	3	\$1.91	\$7,069	3	\$0.26	0.965	\$1,460
	186,263					\$274,794				\$46,733

GSF X Rate X Index = Cost

Source: Spreadsheet from a higher education institution, with annotations added.

Approach to Determine the Potential Savings

A key question of the benchmarking analysis was to answer the question “What would the savings be if other key government agencies and institutions used a professional facilities service management company and achieved similar savings to those achieved under the General Government experience?”

Due to the diversity of facility types in the state’s real estate portfolio, it is difficult to derive a strict “apples-to-apples” comparison. For example, the state has offices, hospitals, classrooms, correctional facilities, etc. The \$ /Gross Square Feet is across a wide range, making it difficult to compare facilities on an apples-to-apples basis. A suggestion by TBR to perform analysis comparing the cost ratios between the different agencies/institutions to better understand the potential for cost savings was agreed to. To perform this work, the team divided the actual cost per gross square foot (\$/GSF) for each agency/campus by the calculated Whitestone Benchmark Cost for that agency/campus to determine the percentage of actual spend against the Whitestone Benchmark Cost.

The ratio is as follows:

$$\frac{\text{Actual Cost / GSF}}{\text{Whitestone Benchmark Cost / GSF}} = \text{XX.X\%}$$

The use of the ratio process enabled the state to use the Whitestone Benchmarks while recognizing that facilities across the state are very diverse, and are not currently maintained to benchmark standards.

Figure 9 shows the normalized data for the General Government scope of work that is currently being managed by a professional facilities management service provider. This is known as the “baseline”.

Figure 9
State of Tennessee Experience Compared to Benchmark

Baseline	\$/GSF	Whitestone	% of Whitestone
Current General Government scope of work managed by professional service provider	\$2.26	7.06	32.0%

The state is spending 32 percent of what the Whitestone Cost Reference indicates is necessary to maintain facilities at the identified service level.

The first column represents the grouping of agencies/institutions that are considered in the analysis. In Figure 9, the “baseline” group represents the current DGS portfolio – the facilities that are already being professionally managed by a professional facilities management service provider (Jones Lang LaSalle). The second column on the chart represents the adjusted annual cost per gross square foot. The third column is the calculated Whitestone Benchmark Cost for that agency/institution. The fourth column is a ratio of column 2 divided by column 3. This number represents the actual costs as a percentage of the appropriate Whitestone benchmark, after all adjustments. The current ratio for the General Government Experience is 32 percent of Whitestone. Therefore, the state is currently spending 32 percent of the Whitestone Benchmark Cost for these facilities.

Using the ratio, the Whitestone benchmark analysis helped the FM team to estimate savings across other agencies/institutions. The estimated statewide costs savings are \$58.8 million above and beyond the savings already achieved in General Government. The estimated savings are based on the reduction in costs for that institution necessary to match the 32 percent for the General Government facilities.

Figure 10 shows the estimated annual cost savings by key agency/institution groupings.

Figure 10
Potential Savings by Agency / Institution

Agency/Institution	\$/GSF	Whitestone	% of Whitestone	Estimated Annual Savings (if achieve same Whitestone percentage as Gen Govt.)
Baseline Savings				
Baseline: Current General Government Scope of Work managed by professional service provider	\$2.26	\$7.06	32.0%	\$5,820,000 Actual Savings in 2014-2015
Additional Savings From Other Institutions/Agencies				
UT System	\$3.29	\$7.92	41.5%	\$17.3 million
TBR Universities	\$2.76	\$6.23	44.2%	\$17.8 million
TBR Community Colleges	\$3.27	\$6.41	50.9%	\$8.7 million
TBR TCAT's	\$2.90	\$6.34	46.8%	\$2.3 million
Remaining General Government	Annual savings estimated by applying savings achieved under current contract			\$12.7 million
TOTAL				\$58.8 million

Note: The \$58.8 million total does not include the \$5.8 million annual savings already realized in the General Government facilities that have already been managed by a professional facilities management service provider.

It's important to understand how to interpret this table, as it critical to understand the estimated savings. Let's start by taking TBR as an example. As you can see in Figure 10, the six universities in the TBR system currently average \$2.76/GSF. The Whitestone Benchmark Cost for those six universities is \$6.23/GSF. Therefore, the state is currently spending 44 percent of the Whitestone Benchmark Cost in these six universities.

A ratio of 100 percent would mean that an institution's actual cost is equal to the Whitestone Benchmark Cost. A ratio of less than 100 percent means an institution's cost is below the Whitestone estimate and a ratio greater than 100 percent would mean that an institution's cost exceed the Whitestone estimate. Because of deferred maintenance and limited funding (see Appendix 1 for more details), almost all campuses were well below 100 percent.

The fact that an institution's actual costs are less than Whitestone does not mean that there are no potential savings to be gained.

The estimated savings is based on what the reduction in the actual costs for that campus/institution would need to be in order to match

the 32 percent benchmark cost ratio calculated for the General Government facilities.

The savings for TBR and the other institutions were then estimated by answering the question, “**What would the actual cost for each entity need to be to reduce their percentage of Whitestone to match the 32 percent?**” The difference between their current annual costs and that adjusted cost is the estimated cost savings.

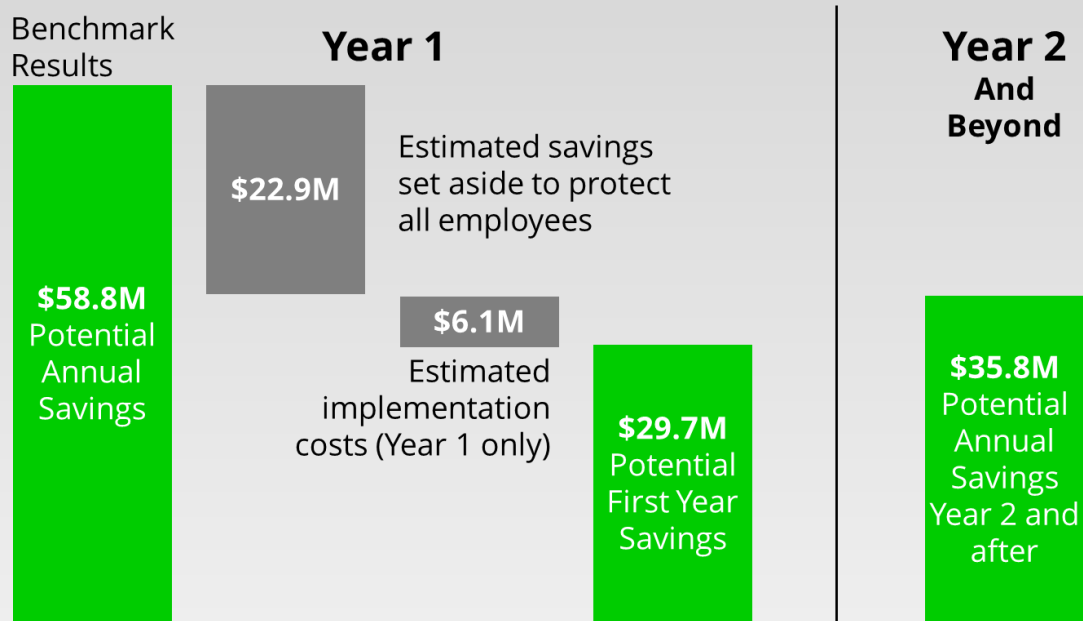
It is important to note calculations for certain general government facilities were not performed using the Whitestone Cost Standards, as many of these facilities are not contained in the Whitestone benchmarks (i.e. prisons, parks, etc.). For these facilities, the team applied the percentage savings attained in the General Government experience against the audited total cost prior to shifting to a professional facilities management service provider. It should also be noted that these savings listed for the remaining General Government facilities may not be obtained in the first year or two, as the Department of General Services and the agencies have agreed that they need to implement some changes to systems, processes and procedures, as well as address certain deferred maintenance issues.

Summary of Findings

Summary of Business Justification Findings

The total estimated first-year savings is approximately \$29.7 million. In the following years, the annual savings is projected to increase to approximately \$35.8 million since first year implementation costs are no longer a factor. A summary of savings potential is illustrated in Figure 11 below. The total potential savings for all state agency and institutions is projected at \$58 million annually. However, FM leadership has agreed to continue with the information gathering process based on the total potential recurring savings of \$35.8 million taking all initial costs to implement and employee protections into consideration. This potential annual estimated savings is significant enough to warrant further exploration, which includes procuring a third party to perform a validation of the cost analysis provided in this report, and gathering qualifications of potential providers. The four components of the business justification have all provided information that the potential for the state to increase service at a lower cost to Tennesseans is probable.

Figure 11
Total Potential Savings



Calculation for Estimated Savings to Protect Employees: Total projected savings were reduced by a factor of \$22.9 million – this represents the estimated savings that will be set aside in order to retain all facilities management employees. This amount was calculated by using the percentage of savings (39 percent) that was obtained in the first year of the general government experience that was directly related to personnel. The state has committed to protecting current facilities management employees if it should decide to utilize a professional services provider and will not be following the approach used in the initial general government experience.

Estimated Implementation Costs (Year 1 only): Estimated implementation costs for the first year were calculated by estimating the costs of the facility management service provider employees that would be added to the current cost structure in the first three months of implementation. As a general rule, it takes about three months for the training, procurement leverage, etc., to offset the management staff costs and for additional savings potential to then be achieved.

Where the Savings Come From

Based on the results from the General Government experience and the Texas A&M results, savings generally come from three key areas:

1. *Improved training/skills.* The single greatest area of savings expected will come from training the current facility management employees to perform work that is currently sub-contracted out to third-party contractors. Examples of this type work include plumbing, electrical, and mid-level general maintenance tasks. Professional facility management service providers have developed training programs to develop employee skills to allow them to achieve the certifications needed to perform these types of work activities. These are training programs that the state could not cost-effectively develop or maintain. Since the facility management service provider can leverage these training programs across multiple clients in many different locations, it is cost effective for them to do so.

As mentioned earlier, a good example is the state's General Government experience. Since performing facilities management of the state's buildings under the scope of the contract, former state employees have gone through many hours of trainings, resulting in certifications that these staff members did not have as state employees. A side benefit of this training to the employees is that it also increased their value in the marketplace and increased compensation for their job. Overall, the state employees retained in the state's General Government experience are paid 28 percent more than they did as state employees. Ten percent of that amount was adjustment for difference in benefits, but the other 18 percent far exceeds normal pay increases experienced by most employees in that time period. In addition, several employees have made statements indicating they feel more valued and appreciated in their new positions, and that their training, system support and compensation are all indications of their perceived value to their new employer.

2. *Procurement Efficiency.* The second major area of savings comes from procurement leverage. Many professional facilities management service providers procure goods and services (e.g. cleaning supplies, paint, etc.) under their scope of work. While it is natural to assume the state can get a better "deal" because of its large buying power and volume discounts, the state's purchasing power does not approach the economies of scale offered by a professional facilities management service provider.

3. *Optimized Staffing.* Professional facilities management service providers have invested millions of dollars on robust staffing and work order management systems that drive staffing efficiencies. Work order management systems enable the service provider to drive efficiencies in how the work gets done, resulting in lower costs to the state.

In addition to cost savings, the FM Core Team believes using professional service provider(s) to manage the state's real estate portfolio will provide the following additional benefits beyond cost savings:

- Improved quality and timeliness of responsible services;
- Centralized management of the in-scope services;
- Implementation of "best in class" practices;
- Innovation resulting in creative solutions;
- Success measured by Key Performance Indicators; and

- Establishment of a scalable solution that evolves with the state's changing needs.

Where the Savings Go

Implementing agencies and institutions will retain the savings achieved. To clarify, the state will not be a part of transactions between higher education institutions or campuses under this potential contract. All transactions will be directly between the organizations that run the facilities/campuses and the service provider(s).

For higher education, savings will take the form of lower payments to the service provider than are currently being experienced in their actual costs. Therefore, the savings will never leave the campus. How those savings are redirected will be at the discretion of the individual campuses and the higher education systems.

For General Government, the savings will result in lower "rent" for the agency. Each agency then will be responsible for redirecting those funds for purposes that benefit the implementing agencies mission, subject to approval by the budget office according to normal procedure.

Next Steps and Timeline

As described above, the next step for the FM initiative is to enter into the Request for Qualifications phase, which involves issuing a Request for Qualification for a third party to validate the cost analysis presented in this report and a separate Request for Qualifications for potential providers (open solicitation) to provide qualifications to perform work for the state. After these two activities, the state will evaluate responses and select the vendor to perform the validation work, and in a separate effort, select qualified vendors to participate in a Request for Proposal to gather cost estimate information the state and institutions can use to compare current actual costs with contract service provider cost estimates. No member of the FM Core Team will participate in the procurement evaluations. *See Figure 3 for summary of the exploration process.*

The exploration process approach could ultimately result in providing a contract tool the state and other institutions could use to meet their facility management needs through a professional contract service provider if they so choose. The estimated time to reach this point in the process requires the remainder of calendar year 2016 for the necessary steps to complete, with implementations estimated to begin in early calendar year 2017. Figure 12 provides the high level proposed timeline for key milestones.

Figure 12
Preliminary Schedule for State Information Gathering Procurement

Calendar Year	2016											2017			
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
Business Justification Validation	Request for Qualifications			Perform Validation											
Contract Procurement		Request for Qualifications				Collaborative Value Development			Request for Proposals			Potential Contract Award	State Entities could begin using Contract		

The top row shows the timeline for the Business Justification Validation process including the time period to acquire the service provider, and complete the tasks. The current estimate is for the RFQ procurement process to take approximately three months, and the actual validation activities to take approximately two months. The current schedule is to issue the RFQ for validation near the first week of March.

The bottom row labeled “Contract Procurement” is the information gathering process schedule to issue a Request for Qualifications to select qualified respondents who have the capabilities to perform facility management across the state’s broad range of facility types. The current schedule estimates issuing a RFQ for vendor qualifications on or about the first of April. The contract procurement process will include a Collaborative Value Development (CVD) process (described earlier) where the state will be soliciting ideas from the qualified respondents to understand best practices for implementation across a portfolio as wide and diverse as the state of Tennessee.

Pending all necessary concurrences per the governance process, and across the proposed schedule, the process is expected to take the remainder of calendar year 2016 and end with potential execution of a contract with one or more professional facilities management service providers. State agencies/institutions may use the contract vehicle if they choose.

It is important to reiterate that each state agency/institution will not have to make the final decision with regards to utilizing a professionally managed service provider until **after** any resulting contract(s) is signed.

It is important to also reiterate that when/if a contract is signed by the state, that each state agency/institution will also have the authority to make the final decision that utilizing a professionally managed service provider is a good fit for their organization. This state sponsored procurement initiative will simply provide a contracting vehicle that the various organizations can use.

Appendices

APPENDIX 1:

Additional Detail About the Whitestone Benchmarking Analysis

This appendix provides additional detail about the Whitestone Benchmarking Analysis, and some of the challenges faced.

About the Data

- Data included direct and indirect costs and included specifying overhead and loading factors. Where possible, the data was separated into contracted costs from employee costs.
- On-going operational and maintenance costs were segmented from upgrades and deferred maintenance projects.
- Costs and GSF for leased facilities were segmented from owned facilities, as not all services are provided in leased facilities.
- Utilities costs were excluded (except Refuse).
- Consideration was also given to exclusion of costs and GSF for facilities that support themselves.

Normalizing the Data

A key aspect of the cost benchmarking was to normalize the data to compare “apples-to-apples”. This appendix shares how the state addressed key challenges in normalizing the data.

Subjective and Inconsistent Service Levels

One of the challenges faced was how to compare costs of varying service levels. The Whitestone Cost Reference has descriptions for each level of service (High, Medium, Low) in each different facility type. For example, Figure 13 shows the service level benchmarks for custodial services in a college lecture classroom.

Figure 13
Example of Service Level / Cost by Facility Type

Model	Level of Service	Description	Cost per GSFT
College Lecture Classrooms	High	Classroom Area: Empty trash, dust with treated cloth, clean chalkboard, clean floors daily. Office areas: Clean floors and remove trash 5 times per week, clean, dust and polish surfaces and window coverings 6 times per month. Dust and polish furniture 2 times per week. Common Areas: Clean floors and remove trash 5 times per week, clean furniture and seating areas once every week. Complete restroom service daily.	\$3.20
	Medium	Classroom Area: Empty trash, dust with treated cloth, clean chalkboard, clean floors 3 times per week. Office areas: Clean floors 3 times per week, remove trash 3 times per week, clean, dust and polish surfaces and window coverings once per week. Dust and polish furniture once per week. Common Areas: Clean floors and remove trash 3 times per week, clean furniture and seating areas once every 2 weeks. Complete restroom service 3 times per week.	\$1.91
	Low	Classroom Area: Empty trash, dust with treated cloth, clean chalkboard, clean floors once per week. Office areas: Clean floors once per week, remove trash 2 times per week, clean, dust and polish surfaces and window coverings once per week. Dust and polish furniture once per week. Common Areas: Clean floors and remove trash 2 times per week, clean furniture and seating areas once every 4 weeks. Complete restroom service 2 times per week.	\$.80

Source: Whitestone Facility Operations Cost Reference

The Whitestone benchmark indicates specific frequency of the various custodial tasks. Because the actual frequencies currently performed rarely align perfectly with the Whitestone suggested benchmark, stakeholders within each institution were asked to review the Whitestone benchmark and select the closest service level used to benchmark their costs.

The initial discussions to select the service levels were held by the FM Core Team. In general, it was determined that the service levels across the board were best described by the Whitestone Medium description. The exceptions to this were as follows:

- Security – the FM Core Team decided to use Low across the board, which is Access Control only, and then subtract any costs for additional services from the costs incurred by the agency/institution. For example, in the General Government facilities, Walden Security provides security services in those buildings. Thus the costs for Walden Security were deleted from the actual costs.
- Management – the Whitestone Low description specifies campus level management, which is appropriate for all Higher Education campuses. The Whitestone Medium description specifies commercial level management, which is a more accurate description for the General Government properties.

These selections were then reviewed by the agencies and institutions, and adjusted by them. The service levels submitted by the agencies and institutions were accepted as is. They will be reviewed by the independent third party during the benchmarking validation.

Variations in Data Capture

Data is not organized in the same manner for all state agencies and institutions, including but not limited to functional areas and loading factors. In the current in-depth benchmarking, we have in some cases excluded certain segments of data from all samples in order to improve the comparability of data points, as we will discuss in more detail below.

To normalize the data, the analysis also factored in for Education and General Services (E&G) and Auxiliary (areas of cost that are expected to be covered by charging for the services, such as parking) for higher education, and adjusted costs to reflect those differences.

Variations in Facility Types

There are also variations in the various facility types around the state. For example, the state has offices, hospitals, classrooms, correctional facilities, etc. The first step in the analysis was to match the space for each facility to the 37 selected Whitestone categories and then apply the Whitestone cost estimates for each category to that space, resulting in a benchmark cost for each agency/institution. The initial discussion occurred among the FM Core Team. The agreement and direction was then executed by the agencies/institutions.

In some cases, the analysis needed to factor in “adjustments” to help make an apples-to-apples comparison between facilities. To provide perspective of the types of variations and the decisions that were made, the examples below illustrate the most significant adjustments made, and also provide the types of adjustments that occurred.

- *Security:* As previously mentioned, the FM Core Team agreed to use the Whitestone Low Level (access control only) across all state facilities, and then subtracted the actual costs of additional services (e.g. Walden Security in General Government). Similar types of security also occur on campuses, but are usually provided under a different budget center (e.g. campus police at UTK).
- *Utility Infrastructure:* The Whitestone Cost Reference includes all costs of infrastructure provided by the utility company up to the side of the building in the Energy Service Category. All costs relating to the infrastructure inside the building are included in the Maintenance and Repair Service Category. However, on many campuses, there is a significant infrastructure in between the utility meter and the building. Therefore, the campuses had to estimate the cost of maintaining this additional infrastructure and add it to the Whitestone total cost. This estimate was performed using the same methodology specified by Whitestone in their description of how their costs were calculated.
- *Leased Facilities:* In a leased facility, some or all of the maintenance may be provided by the landlord. It was virtually impossible to determine these services on a building by building basis. Therefore, the FM Core Team decided to remove all costs for maintaining leased facilities, and the gross square feet of those leased facilities, from the calculations.

Deferred Maintenance and Budget Constraints

The Whitestone Cost Reference is based on best practices in facility management. Best practices assume all needed facility maintenance is performed at the appropriate time, and that associated funding is available to do so at the time needed. Unfortunately, many state agencies and institutions are budget constrained and simply do not have adequate funding for many maintenance needs (e.g. such as replacing a roof, installing a new HVAC system). Work that is not performed at the time needed results in what is termed “Deferred Maintenance,” which is defined as work needed but not performed in order to meet budget funding levels. It has been estimated that the state currently faces \$4.2 billion in Deferred Maintenance. The impact is that the state’s cost per gross square foot is well below the Whitestone Cost Reference for this reason.

As explained earlier, a ratio of 100 percent means an agency/institution’s cost is equal to the Whitestone estimate. A ratio of less than 100 percent means an agency/institution’s cost is below the Whitestone estimate and a ratio greater than 100 percent would mean that an institution’s cost exceeds the Whitestone estimate. Because of the limited funding issue described above, all campuses were well below 100 percent.

APPENDIX 2:

Detailed Cost Comparison for Higher Education Facilities

Figure 14 provides a more detailed comparison of the benchmark analysis for the higher education facilities.

Figure 14
Adjusted Potential Savings by Campus

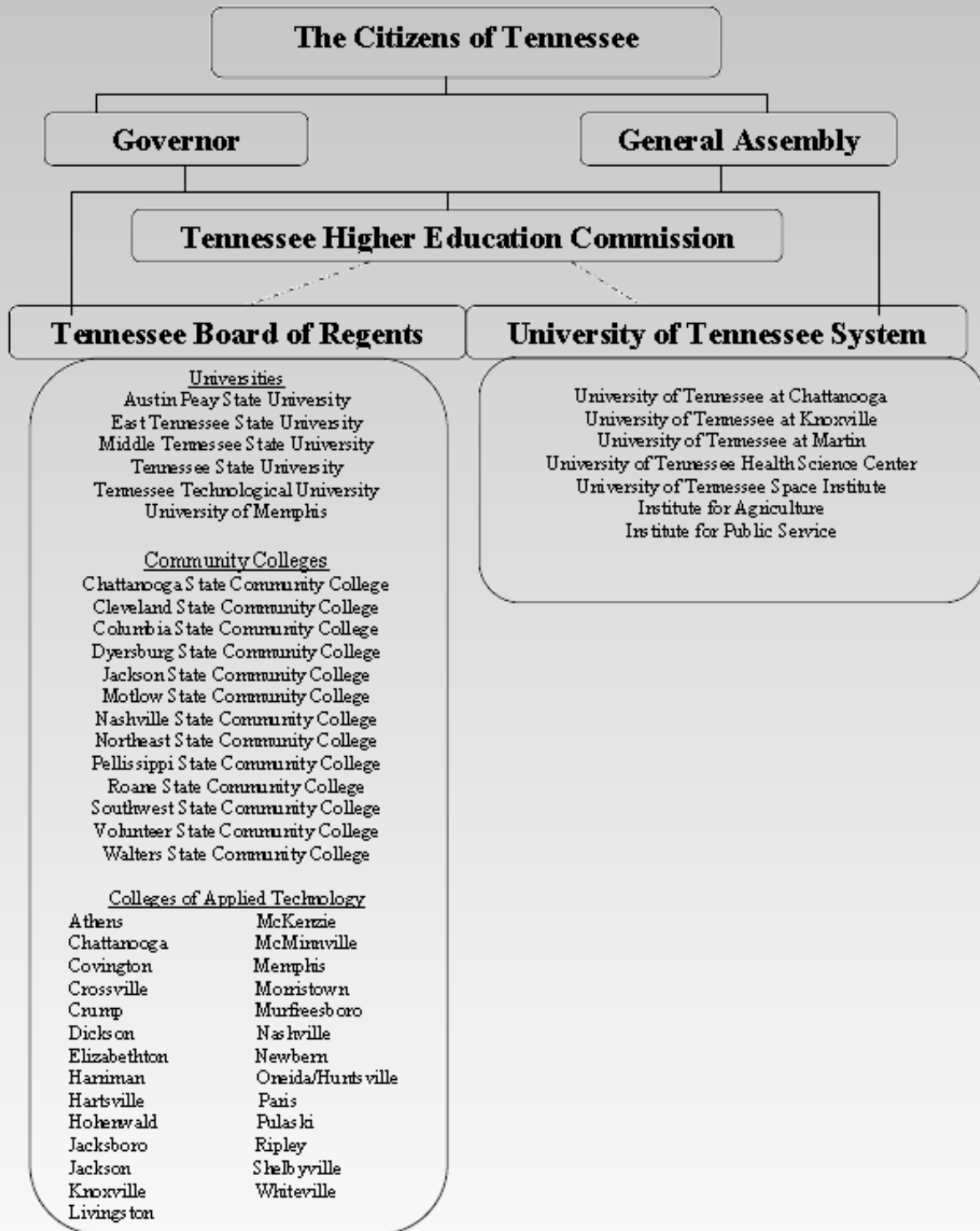
Comparative Cost - \$/GSF (No Utilities Included)													
Higher Education							General Government - FINAL						
UT System	UTK	UTC	UTM	UTHSC			DGS Portfolio						
Whitestone	7.77	7.41	10.13	7.33			Whitestone	7.06					
Current	3.28	2.62	3.15	3.95			Current	2.26					
% of Whitestone	42%	35%	31%	54%			% of Whitestone	32.0%					
Potential Benchmark Savings	\$11.5	\$0.7	(\$0.2)	\$5.4									
Adjusted Annual Savings	\$7.0	\$0.4	(\$0.1)	\$3.3									
TBR System	APSU	ETSU	MTSU	TSU	TTU	UoM	TCATs (27)						
Whitestone	6.70	6.49	5.85	6.69	6.83	5.66	7.18						
Current	3.39	2.43	2.31	2.51	2.59	3.05	3.36						
% of Whitestone	51%	37%	39%	38%	38%	54%	47%						
Potential Benchmark Savings	\$2.9	\$1.7	\$2.6	\$1.1	\$1.2	\$8.4	\$2.3						
Adjusted Annual Savings	\$1.7	\$1.0	\$1.6	\$0.6	\$0.8	\$5.1	\$1.4						
	ChSCC	CISCC	CoSCC	DSCC	JSCC	MSCC	NaSCC	NeSCC	PSCC	RSCC	STCC	VSCC	WSCC
Whitestone	6.16	5.72	6.05	6.20	6.45	5.80	6.04	6.01	6.04	6.92	6.19	5.78	7.37
Current	3.97	3.22	3.27	2.24	4.39	3.99	2.82	4.69	2.95	2.58	1.72	5.01	2.99
% of Whitestone	65%	56%	54%	36%	68%	69%	47%	78%	49%	37%	28%	87%	41%
Potential Benchmark Savings	\$1.5	\$0.5	\$0.5	\$0.1	\$0.8	\$0.8	\$0.5	\$1.0	\$0.8	\$0.3	(\$0.3)	\$1.6	\$0.6
Adjusted Annual Savings	\$0.9	\$0.3	\$0.3	\$0.1	\$0.5	\$0.5	\$0.3	\$0.6	\$0.5	\$0.2	(\$0.2)	\$1.0	\$0.4

This chart presents the breakdown of the current actual costs against the Whitestone Cost Benchmarks for each institution. For quick reference, we have color-coded any percentage that is three (3) percent or more under the 32 percent benchmark in green. Any percentage that is from two (2) percent less to five (5) percent more than the 32 percent benchmark is shown in yellow. All percentages that are more than six (6) percent above the 32 percent benchmark are shown in orange.

Important considerations:

- The data submitted by each institution is the data used in these calculations.
- Costs will be examined by the third party in the benchmarking validation. When the total calculations were performed for the estimated annual savings, the numbers for some of those institutions were negative. However, they were not adjusted, and therefore the projected annual savings was actually reduced by those institutions.

Tennessee Public Higher Education Governance/Coordination Structure



APPENDIX 3:***Definitions and explanations of acronyms***

\$/GSF	Cost per square foot to operate facility
CFG	Offices of Customer Focused Government
Contract Award	Potential award of contract to selected professional contract service provider(s) to perform facilities management
CVD	Collaborative Value Development – a process to use qualified respondents expertise to understand best practices
DGS	Department of General Services
Facility Type	Type of space (office, classroom, etc.)
FM	Facility Management
FM Core Team	Primary working group responsible for investigation, with members from UT, TBR, General Government, Procurement and CFG
FRF	Facilities Revolving Fund – often used to designate the DGS facilities that have already been outsourced
General Government	Facilities that have already been contracted under previous agreement, included office space, auditoriums, laboratories, storage, etc.
GSF	Gross Square Feet
HEGIS	Higher Education General Information Survey (space classification codes)
Implementation	State entities could begin using contract to use FM service provider to perform work if they so choose
PMO	Project Management Office
RFP	Request for Proposal – to gather cost proposals from potential service providers
RFQ	Request for Qualifications
RFQ.1	The RFQ to procure Business Justification Validation services – an independent third party verification/validation of the business justification cost analysis
RFQ.2	The RFQ to evaluate and select qualified respondents to provide the facility management services. An open solicitation to understand qualifications of potential service providers, and select the qualified respondents for the CVD Process
SEREM	Strategies for Efficiency in Real Estate Management
Service Category	Breakdown of service categories in the Whitestone Cost reference – Custodial, Grounds, Maintenance & Repair, etc.)
Service Level	What services are performed and how often for each Facility Type and each Service Category
STREAM	State of Tennessee Real Estate Asset Management
TBR	Tennessee Board of Regents
UT	University of Tennessee
TCAT	Tennessee Colleges of Applied Technology

Acknowledgements

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